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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,261	12/06/2000	Joel F. Habener	17633/1230	9060

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EXAMINER

WEHBE, ANNE MARIE SABRINA

ART UNIT PAPER NUMBER

1632

DATE MAILED: 10/07/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,261

Applicant(s)

HABENER ET AL.

Examiner

Anne Marie S. Wehbe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 and 30-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 20,22.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Applicant's amendment and response received on 7/15/03 has been entered. Claims 1-41 are pending in the instant application. This application contains claims 1-18, and 30-41 drawn to an invention nonelected with traverse in Paper No. 16. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01. Claims 19-29 are currently under examination. An action on the merits follows.

Priority

The applicant has amended the specification to contain a specific reference to the provisional applications listed in the declaration as the first sentence of the specification following the title. However, the applicant has not accompanied this amendment with a proper petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), the surcharge required under 37 CFR 1.17(t), and a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The applicant has argues that since the priority data was included on the patent application transmittal and published application, the applicants are not required to submit a petition or the accompanying fees and statements. This argument is not persuasive. Listing priority data on an application transmittal does not fulfill the requirements for priority to a provisional application

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under 35 U.S.C. 119(e). 37 C.F.R. 1.78 clearly sets forth the requirements to be met in order to perfect priority to a earlier filed application. 37 C.F.R. 1.78 makes clear that if applicant desires priority under 35 U.S.C. 119(e) based upon a previously filed copending application, specific reference to the earlier filed application must be made in the instant application as the first sentence of the specification following the title. The previous office action correctly pointed out that in applications for a utility or plant application filed on or after November 29, 2000, any claim for priority must be made during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2) and (a)(5). This time period is **not extendable** and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) a surcharge under 37 CFR 1.17(t), and (2) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Commissioner may require additional information where there is a question whether the delay was unintentional. The petition should be directed to the Office of Petitions, Box DAC, Assistant Commissioner for Patents, Washington, DC 20231. Therefore, since the applicant did not comply with the requirements for receiving benefit of the listed provisional

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applications within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application, the effective filing date of this application is the actual filing date of the instant application, 12/6/00.

Claim Rejections - 35 USC § 112

The rejection of claims 19-21 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps is maintained. Applicant's arguments have been fully considered but have not been found persuasive in overcoming the instant grounds of rejection for reasons of record as discussed in detail below.

The applicant argues that the identification of nestin-positive cells is non-essential to the instant methods and that if the entire population of cells were subjected to an identification step, the resulting cells would not be viable. The previous office action simply stated that in the absence of a step which identifies nestin positive cells, cells which are nestin positive cannot be selected. The previous office action did not state that the entire population needed to be subjected to a assay which would render the cells non-viable. The method of claim 19 only contains the following method steps: 1) removing a pancreatic islet from a donor, 2) culturing cells from the pancreatic islet, and 3) selecting a nestin-positive clone from the culture. The pancreatic islets contain many different cell types including islet cells, fibroblasts, and other non-islet cell types. Culturing the cells according to the methods disclosed in the specification does not kill off the

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non-islet cell types. Thus, following the culture step, many different cell types are still present. The next step calls for selecting a nestin-positive clone. However, the methods as claimed lack any step by which nestin-positive cells can be differentiated from the other cells types in the culture. Looking to the specification, the actual methods used to isolate nestin-positive cells include the essential step of removing floating cells from cells adhered to concanavalin A coated plates. The specification teaches that the floating cells are islets whereas the adherent cells are fibroblasts or other non-islet cell types. The specification then teaches a second essential step wherein the floating cells are cultured on plates without concanavalin A. In this step, the islet cell adhere to the surface and grow out to form a monolayer. According to the specification, it is these cells in the monolayer which are nestin-positive. Therefore, according to the specification's own methods, nestin-positive cells can only be identified following culture of the islets on concanavalin A plates, removal of non-adherent cells, reculture of the non-adherent cells on plates without concanavalin A, and selection of cells in the resulting monolayer. Please note that while claim 20 does in fact include the two culture steps, the method claimed in claim 20 still lacks the essential steps of choosing the appropriate cells for reculture; i.e. the non-adherent cells in the concanavalin A plates.

Claim Rejections - 35 USC § 102

The rejection of claims 22-23 under 35 U.S.C. 102(a) as being anticipated by Stoffers et al. (2000), Diabetes, Vol. 49, 741-748, is maintained. Applicant's arguments have been fully

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considered but have not been found persuasive in overcoming the instant grounds of rejection for reasons of record as discussed in detail below.

The applicant argues that the priority date is 12/6/99 and therefore the Stoffers reference is not prior art. This argument is not persuasive as the applicant has not been granted priority to provisional U.S. application no. 60/169,082, filed on 12/6/99. See the priority section above.

The rejection of claims 24-29 under 35 U.S.C. 102(e) as being anticipated by U.S. patent No. 6,436,704 (8/20/02), hereafter referred to as Roberts et al., is maintained. Applicant's arguments have been fully considered but have not been found persuasive in overcoming the instant grounds of rejection for reasons of record as discussed in detail below.

The applicant argues that the priority date is 12/6/99 and therefore the Roberts patent is not prior art. This argument is not persuasive as the applicant has not been granted priority to provisional U.S. application no. 60/169,082, filed on 12/6/99. See the priority section above.

Claims 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu et al. (1999) Diabetes, Vol. 48, 2270-2276, is maintained. Applicant's arguments have been fully considered but have not been found persuasive in overcoming the instant grounds of rejection for reasons of record as discussed in detail below.

The applicant argues that, "[t]he fact that a certain result of characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result of characteristic",

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citing *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) , *In re Oelrich*, 666 F. 2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981), and further *In re Robertson*, 19 F.3e 743,745, 49 USPQ2d 1949,1950-51 (Fed. Cir. 1999). Regarding Xu et al., the applicant argues that it would require further experimentation to determine whether a population of nestin-positive cells in a untreated rat is identical to nestin-positive cells in a rat that has undergone a surgical procedure, or that nestin-positive cells are contacted by the administration of exendin-4 following intraperitoneal administration of exendin-4.

In response, the previous office action pointed out that applicant's claims read on the treatment of nestin-positive pancreatic stem cells both *in vivo* and *in vitro*, and that the claims as written only contain a single method step, treating a nestin-positive pancreatic stem cell with an agent selected from a group which includes IDX-1. Further, the claims as written read on nestin-positive pancreatic stem cells in any mammal which may or may not have had a surgical procedure or sham surgical procedure. In addition, the rejection as written is not based on inherency per se. The rejection as written is based on the fact that Xu et al. teaches the exact same method steps as applicant's claims as written. The only method step in the claims is "treating a nestin-positive pancreatic stem cell with an agent" selected from a group which includes IDX-1. As the applicants acknowledge in their response, the pancreas does in fact contain nestin-positive pancreatic stem cells. Xu et al. further teaches that the administration of exendin-4 *in vivo* in rats results in the differentiation of new β -cells from pancreatic progenitor cells present in the pancreas (Xu et al., pages 2270 and 2275). Thus, since Xu et al. teaches that pancreatic progenitor cells

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present in the pancreas are responding to the exendin-4 treatment, the skilled artisan would not doubt that cells present in the pancreas, which include nestin-positive cells, are exposed to exendin-4 following intraperitoneal administration. As noted in the previous office action, it is a general rule that merely discovering and claiming a new benefit to an old process cannot render the process again patentable. In re Woodruff, 919 F. 2d 1575, 1577-78, 16 USPQ2d 1934, 1936-37 (Fed.Cir. 1990); In re Swinehart, 439 F.2d 210, 213, 169 USPQ 226, 229 (CCPA 1971); and Ex Parte Novitski, 26 USPQ2d 1389, 1391 (Bd. Pat. App. & Int. 1993). The Xu et al. process includes the administration of exendin-4 *in vivo* by intraperitoneal injection such that cells in the pancreas are exposed to the exendin-4. This is equivalent to the method step present in applicant's claimed methods. Thus, the process of inducing the differentiation of pancreatic ductal tissue by treatment with exendin-4 as taught by Xu et al. anticipates the instant invention as claimed.

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

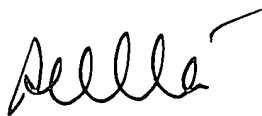
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication from the examiner should be directed to Anne Marie S. Wehbé, Ph.D., whose telephone number is (703) 306-9156. The examiner can be reached Monday- Friday from 10:30-7:00 EST. If the examiner is not available, the examiner's supervisor, Deborah Reynolds, can be reached at (703) 305-4051. General inquiries should be directed to the group receptionist whose phone number is (703) 308-0196. The technology center fax number is (703) 872-9306.

Dr. A.M.S. Wehbé

ANNE M. WEHBE' PH.D
PRIMARY EXAMINER

A handwritten signature in cursive script, appearing to read 'Anne M. Wehbé', with a long horizontal stroke extending to the right.